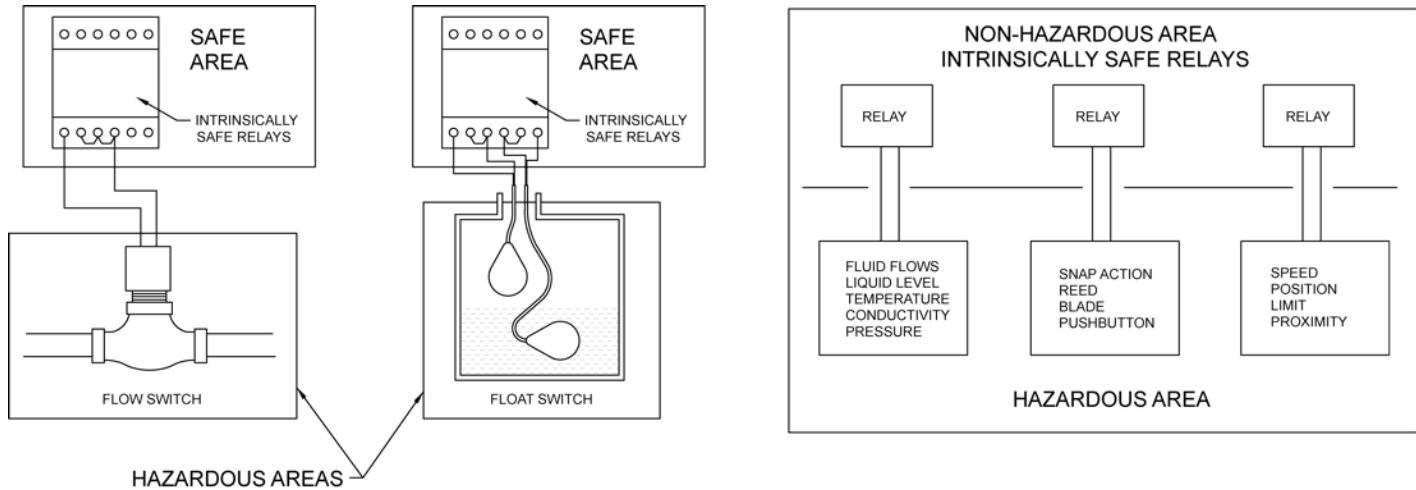


# INTRINSICALLY SAFE SOLID STATE HAZARDOUS AREA RELAY

## Series 27

ALLOWS USE OF STANDARD, OFF-THE-SHELF SWITCHES IN HAZARDOUS AREAS



### What is intrinsically safe?

- Intrinsically safe equipment and wiring is equipment and wiring which is incapable of releasing sufficient thermoelectric energy to cause ignition of a hazardous atmospheric mixture of gases, vapors, or dusts. Intrinsically safe electrical equipment and wiring may be installed in any hazardous location of any group classification for which it is accepted without requiring explosion-proof housings or other means or protection.

### Operational Features:

- Modern, cost effective, solid state technology eliminates expensive, old style, explosion proof enclosures.
- Installation and maintenance of equipment is fast, simple, and inexpensive.
- Long-term safety and reliability is increased substantially by elimination of sealed joints, special housings, and gaskets.
- Epoxy encapsulation of solid state circuitry provides protection against harsh industrial environments.
- Immunity to normal shocks, vibrations, thermal expansion, and contraction.

### Single Unit Provides Two Modes of Operation for Liquid Level Applications

- 1) Single Non-Latching Input for high or low level alarm.
- 2) Dual Latching Input for Pump Up/Pump Down liquid level control.

### Approved For Use in the Following Hazardous Areas:

**CLASS 1 AND 2      DIVISION 1      GROUPS A, B, C, D, E, F, AND G**  
**CLASS 3**

### Approved: Factory Mutual System and U.L.

**Versatile Single and Dual Input Switching Logic also allows one Unit to be Used in a Multitude of Alarm and Control Applications, Such as:**

Fluid Flow	Pressure	Temperature	Limits
Speed	Proximity	Conductivity	Position...



Limited Warranty Page 7

# Specifications

## Contact Design: SPDT

One normally open (N.O.) and  
One normally closed (N.C.)

## Contact Ratings

8 amperes resistive load at 120/250 volts A.C. and 8 amperes at 30 volts D.C.

## Contact Life

Electrical at rated load = 100,000 cycles.  
Mechanical - 10,000,000 cycles

## Electronic Module

Solid State components epoxy encapsulated in nylon shell.

## Primary (A.C. Supply Line)

- (a) Voltage: 120 or 240 VAC, plus 10% minus 15%
- (b) Frequency: 50/60 Hertz
- (c) Power: Relay energized 2.2 watts

## Secondary Nominal Voltage 11.3 VAC, 2.3 mA

## Sensitivity

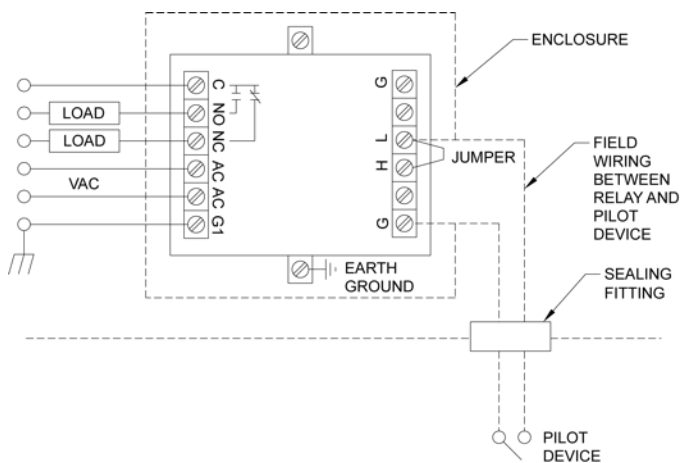
Operates from 0 - 100,000 ohm maximum specific resistance.

## Temperature

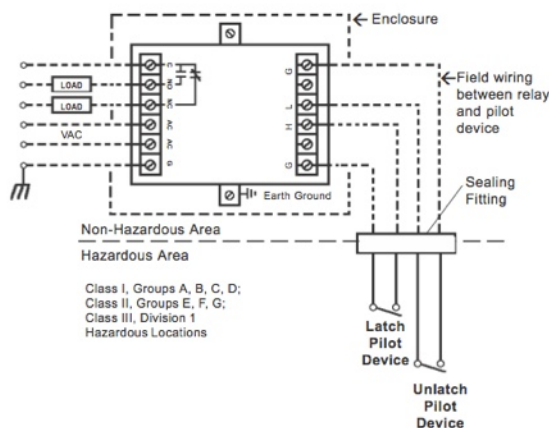
-40° to 150°F ambient. Terminals: Size 6 pan head screws with captivated wire clamping plate.

## Single Input (Non-Latching) Pilot Contact Actuated

NOTE: Jumper must be installed as shown to insure proper operation.



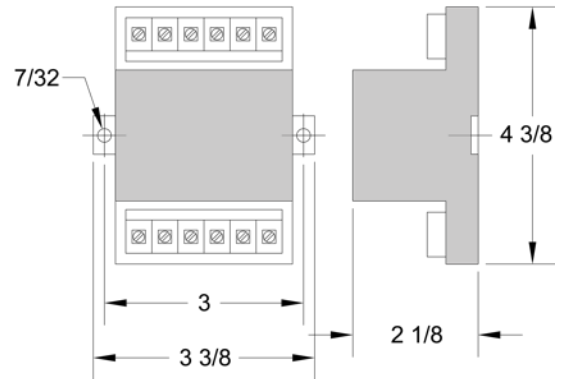
## Dual Input (Latching) Pilot Contact Actuated



Each unit is provided with detailed installation instruction sheet, wiring diagram, and hazardous area information background resume. Both models are product of Warrick Controls, Inc. a subsidiary of Armstrong International, Inc.

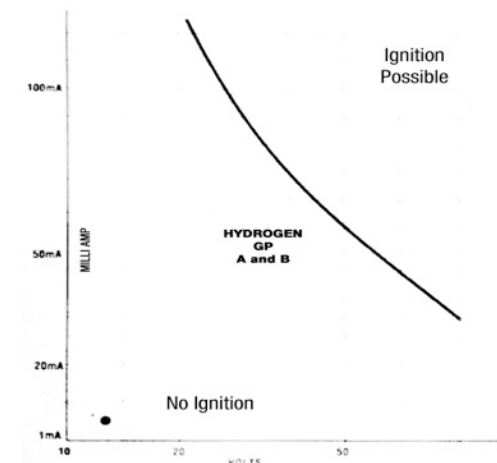
# Series 27

## Dimensions



## The Switching Current vs. Voltage Plot

shown below illustrates areas of safe and unsafe operation. The operating point of Series 27 Intrinsically Safe Relays confirms the conservative design of this module.



## Order Numbers

- P/N S17 / A / 3 / C / 0  
For use with 24 VAC Input Power
- P/N S27 / A / 1 / D / 0  
For use with 115/120 VAC 50/60 Input Power
- P/N S27 / A / 2 / D / 0  
For use with 220/240 VAC 50/60 Hz Input Power

## Warranty

Warrick Controls, Inc. warrants to the original user that those products supplied by it and used in the service and in the manner for which they are intended shall be free from defects in materials and workmanship for a period of one (1) year after installation, or fifteen (15) months from the date of shipment. WARRICK DOES NOT MAKE ANY OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR MERCHANTABILITY AND ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. In no event shall Warrick be liable for special, direct, indirect or consequential damages, including, but not limited to, loss of use or profits or to interruption of business activity.

- Installation drawing and a numbered parts list is supplied with each unit.
- Current Price Information is Listed on Separate Sheet.
- Special One Day Delivery Available.